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SPACE OPERATIONS CONTROL CENTER
GODDARD SPACE FLIGHT CENTER
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GREENBELT, MARYLAND
CODE-1

VOLUME 2, No. 5

FEBRUARY 27, 1962

SATELLITE SITUATION REPORT,

THE FOLLOWING REPORT REFLECTS DATA COMPUTED AND COMPILED BY
GODDARD SPACE FLIGHT CENTER, NORAD, AND SMITHSONIAN ASTROPHYSICAL
OBSERVATORY AS OF 1200Z ON FEBRUARY 27, 1962.

SPECIAL EVENTS:

1. THE UNITED STATES SUCCESSFULLY ORBITED AND RECOVERED THE
FRIENDSHIP 7 MERCURY CAPSULE PILOTED BY LT. COL. JOHN H. GLENN ON
FEBRUARY 20, 1962.
2. THE DISTANCES GIVEN IN THIS AND ALL FUTURE SATELLITE
SITUATION REPORTS WILL BE GIVEN IN KILOMETERS (KM.).

OTS PRICE

XEROX

\$

1.10 ph

MICROFILM

\$

0.80 ph

Richard W. Loom

for RALPH R. STROBLE
HEAD, OPERATIONS BRANCH

NASA TM X-50304
CITS: \$1.10 ph, \$0.80 ph

Sp. 1000000
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TMX-50,204

OBJECTS IN ORBIT				PERIGEE		TRANSMITTING		
OBJECT	CODE NAME	SOURCE	LAUNCH	NODAL PERIOD	INCLINATION	APOGEE	PERIGEE	FREQ. (MC/S)
						Km.	Km.	
1958 ALPHA 1	EXPLORER I	US	1 FEB 58	105.9	33.17	1748	342	
1958 BETA 1	ROCKET BODY	US	17 MAR 58	138.3	34.26	4314	664	
1958 BETA 2	VANGUARD I	US	17 MAR 58	133.9	34.26	3955	641	108.024
1959 ALPHA 1	VANGUARD II	US	17 FEB 58	125.3	32.86	3296	547	
1959 ALPHA 2	ROCKET BODY	US	17 FEB 58	129.5	32.90	3663.	552	
1959 ETA 1	VANGUARD III	US	18 SEP 59	129.7	33.26	3723	509	
1959 MU*	LUNIK I	USSR	2 JAN 59	450D	0.01	1.3156AU	0.9766AU	
1959 NU*	PIONEER IV	US	3 MAR 59	398D	0.127	1.1421AU	0.9871AU	
1959 IOTA 1	EXPLORER VII	US	13 OCT 59	101.1	50.33	1077	551	19.9907
1959 IOTA 2	ROCKET BODY	US	13 OCT 59	100.9	50.27	1062	548	
1960 ALPHA*	PIONEER V	US	11 MAR 60	311.6D	3.35	.9951AU	.8061AU	
1960 BETA 1	ROCKET BODY	US	1 APR 60	99.1	48.39	775	691	
1960 BETA 2	TIROS I	US	1 APR 60	99.1	48.38	750	691	
1960 BETA 3	NONE	US	1 APR 60	97.8	48.50	700	618	
1960 BETA 4	NONE	US	1 APR 60	99.8	48.17	811	697	
1960 GAMMA 2	TRANSIT 1B	US	13 APR 60	94.7	51.26	664	346	
1960 GAMMA 4	NONE	US	13 APR 60	96.8	51.25	742	474	
1960 EPSILON 1	SPUTNIK IV	USSR	15 MAY 60	91.3	64.94	416	255	
1960 EPSILON 3	NONE	USSR	15 MAY 60	92.9	64.97	550	282	
1960 EPSILON 4	NONE	USSR	15 MAY 60	POSITION UNCERTAIN				
1960 ZETA 1	MIDAS II	US	24 MAY 60	94.2	33.06	522	457	
1960 ETA 1	TRANSIT 2A	US	22 JUN 60	101.6	66.70	1049	622	162;216
1960 ETA 2	GREB	US	22 JUN 60	101.6	66.71	1050	620	
1960 ETA 3	ROCKET BODY	US	22 JUN 60	101.4	66.66	1033	618	
1960 IOTA 1	ECHO I	US	12 AUG 60	116.2	47.22	1875	1154	
1960 IOTA 2	ROCKET BODY	US	12 AUG 60	118.0	47.21	1677	1511	
1960 IOTA 3	METAL OBJECT	US	12 AUG 60	118.2	47.22	1682	1521	
1960 IOTA 4	METAL OBJECT	US	12 AUG 60	118.2	47.23	1723	1484	
1960 IOTA 5	METAL OBJECT	US	12 AUG 60	118.3	47.26	1685	1535	
1960 NU 1	COURIER 1B	US	4 OCT 60	106.9	28.26	1216	963	107.9709
1960 NU 2	ROCKET BODY	US	4 OCT 60	106.4	28.28	1206	930	
1960 XI 1	EXPLORER VIII	US	3 NOV 60	112.5	49.98	2262	424	
1960 XI 2	ROCKET BODY	US	3 NOV 60	112.2	49.96	2239	425	
1960 XI 3	NONE	US	3 NOV 60	110.8	49.39	2135	399	
1960 XI 4	NONE	US	3 NOV 60	111.7	50.54	2187	426	

OBJECTS IN ORBIT (CONT'D)

OBJECT	CODE NAME	SOURCES	LAUNCH	NODAL PERIOD	INCLINATION	APOGEE Km.	PERIGEE Km.	TRANSMITTING FREQ. (MC/S)
1960 PI 1	TIROS II	US	23 NOV 60	98.2	48.52	735	615	
1960 PI 2	ROCKET BODY	US	23 NOV 60	98.1	48.52	732	609	
1960 PI 3	NONE	US	23 NOV 60	98.1	48.52	727	617	
1960 PI 4	NONE	US	23 NOV 60	98.3	48.52	737	621	
1961 ALPHA 1	SAMOS II	US	31 JAN 61	94.9	97.40	543	477	
1961 ALPHA 2	METAL OBJECT	US	31 JAN 61	94.9	97.37	540	477	
1961 GAMMA 1*	VENUS PROBE	USSR	12 FEB 61	300D	0.581	1.0190AU	0.7183AU	
1961 DELTA 1	EXPLORER IX	US	16 FEB 61	118.0	38.76	2438	757	
1961 DELTA 2	ROCKET BODY	US	16 FEB 61	118.4	38.84	2594	638	
1961 DELTA 3	NONE	US	16 FEB 61	118.1	38.87	2503	705	
1961 DELTA 4	NONE	US	16 FEB 61	POSITION UNCERTAIN				
1961 EPSILON 1	DISCOVERER XX	US	17 FEB 61	92.5	80.82	513	273	
1961 ZETA 1	DISCOVERER XXI	US	18 FEB 61	91.9	80.66	509	218	
1961 KAPPA 1	EXPLORER X	US	25 MAR 61	POSITION UNCERTAIN				
1961 LAMBDA 1	DISCOVERER XXIII	US	8 APR 61	91.1	82.18	398	248	
1961 LAMBDA 2	CAPSULE	US	8 APR 61	94.5	81.88	772	207	
1961 NU 1	EXPLORER XI	US	27 APR 61	107.8	28.80	1783	487	
1961 OMICRON 1	TRANSIT 4A	US	29 JUN 61	103.8	66.80	997	881	54;150;324;400
1961 OMICRON 2	INJUN-SR-3	US	29 JUN 61	103.8	66.80	997	883	136.5
1961 OMICRON 3-45**	METAL OBJECTS	US	29 JUN 61					
1961 OMICRON 47-74**	METAL OBJECTS	US	29 JUN 61					
1961 RHO 1	TIROS III	US	12 JUL 61	100.3	47.89	814	742	108.0;108.03
1961 RHO 2	ROCKET BODY	US	12 JUL 61	100.3	47.89	813	739	
1961 RHO 3	METAL OBJECT	US	12 JUL 61	98.8	47.95	799	611	
1961 RHO 4	METAL OBJECT	US	12 JUL 61	101.9	47.88	928	780	
1961 SIGMA 1	MIDAS III	US	12 JUL 61	161.5	91.15	3541	3349	
1961 SIGMA 3	METAL OBJECT	US	12 JUL 61	161.2	91.12	3543	3319	
1961 SIGMA 4	METAL OBJECT	US	12 JUL 61	161.9	91.45	3573	3350	
1961 UPSILON 1	EXPLORER XII	US	16 AUG 61	1594.0	33.83	76985	693	
1961 ALPHA DELTA 1	MIDAS IV	US	21 OCT 61					
1961 ALPHA EPSILON 1	DISCOVERER XXXIV	US	5 NOV 61	95.9	82.47	874	239	

OBJECTS IN ORBIT (CONT'D)

<u>OBJECT</u>	<u>CODE NAME</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>NODAL PERIOD</u>	<u>INCLINATION</u>	<u>APOGEE Km.</u>	<u>PERIGEE Km.</u>	<u>TRANSMITTING FREQ. (MC/S)</u>
1961 ALPHA ETA 1	TRANSIT IV-B	US	15 NOV 61	105.6	32.43	1095	968	136.8; 54; 324; 150; 400
1961 ALPHA ETA 2	TRACC	US	15 NOV 61	105.6	32.43	1107	957	136.65; 54; 324
1961 ALPHA ETA 3	ROCKET BODY	US	15 NOV 61	105.5	32.41	1093	956	
1961 ALPHA KAPPA 1	DISCOVERER XXXVI	US	12 DEC 61	39.7	81.15	297	212	20.005; 40.01
1962 ALPHA 1*	RANGER III	US	26 JAN 62	406.4D	.3988	1.163AU	0.9839AU	
1962 BETA 1	TIROS IV	US	8 FEB 62	100.3	48.29	847	705	
1962 BETA 2	ROCKET BODY	US	8 FEB 62	101.3	48.17	940	707	136.23; 136.92
1962 BETA 3	METAL OBJECT	US	8 FEB 62	99.4	48.43	768	700	
1962 BETA 4	METAL OBJECT	US	8 FEB 62	100.3	48.27	842	707	

*APHELION, PERIHELION IN ASTRONOMICAL UNITS, INCLINATION TO ECLIPTIC.

**SEVENTY-FOUR METAL OBJECTS HAVE BEEN IDENTIFIED AS HAVING BEEN LAUNCHED WITH 1961 CMICRON 1 AND 1961 CMICRON 2. OBJECTS OF THIS SERIES THAT HAVE DECAYED CAN BE FOUND IN THE DECAYED OBJECTS LISTS.

DECAYED OBJECTS

<u>OBJECT</u>	<u>CODE NAME</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>DECAY</u>
1957 ALPHA 1	ROCKET BODY	USSR	4 OCT 57	1 DEC 57
1957 ALPHA 2	SPUTNIK I	USSR	4 OCT 57	EARLY JAN 58
1957 BETA 1	SPUTNIK II	USSR	3 NOV 57	14 APR 58
1958 GAMMA 1	EXPLORER III	US	26 MAR 58	28 JUN 58
1958 DELTA 1	ROCKET BODY	USSR	15 MAY 58	3 DEC 58
1958 DELTA 2	SPUTNIK III	USSR	15 MAY 58	6 APR 60
1958 EPSILON	EXPLORER IV	US	26 JUL 58	23 OCT 59
1958 ZETA 1	ATLAS	US	18 DEC 58	21 JAN 59
1958 ETA 1	PIONEER I	US	11 OCT 58	12 OCT 58
1958 THETA 1	PIONEER III	US	6 DEC 58	7 DEC 58
1959 BETA 1	DISCOVERER I	US	28 FEB 59	EARLY MAR 59
1959 GAMMA 1	DISCOVERER II	US	13 APR 59	26 APR 59
1959 DELTA 1	EXPLORER VI	US	7 AUG 59	PRESUMED PRIOR JUL 61
1959 DELTA 2	ROCKET BODY	US	7 AUG 59	PRESUMED PRIOR JUL 61
1959 EPSILON 1	DISCOVERER V	US	13 AUG 59	28 SEP 59
1959 EPSILON 2	CAPSULE	US	13 AUG 59	11 FEB 61
1959 ZETA 1	DISCOVERER VI	US	19 AUG 59	20 OCT 59
1959 THETA 1	LUNIK III	USSR	4 OCT 59	APR 60
1959 KAPPA 1	DISCOVERER VII	US	7 NOV 59	26 NOV 59
1959 LAMBDA 1	DISCOVERER VIII	US	20 NOV 59	8 MAR 60
1959 XI 1	LUNIK II	USSR	12 SEP 59	13 SEP 59*****
1960 GAMMA 1	ROCKET BODY	US	13 APR 60	18 AUG 60
1960 GAMMA 3	METAL OBJECT	US	13 APR 60	JUL 60
1960 DELTA 1	DISCOVERER XI	US	15 APR 60	26 APR 60
1960 EPSILON 2	ROCKET BODY	USSR	15 MAY 60	17 JUL 60
1960 EPSILON 5	NONE	USSR	15 MAY 60	SEP-OCT 60
1960 EPSILON 6	NONE	USSR	15 MAY 60	SEP-OCT 60
1960 EPSILON 7	NONE	USSR	15 MAY 60	24 SEP 60
1960 EPSILON 8	NONE	USSR	15 MAY 60	SEP-OCT 60
1960 EPSILON 9	NONE	USSR	15 MAY 60	SEP-OCT 60
1960 ZETA 2	METAL OBJECT	US	24 MAY 60	5 DEC 60
1960 THETA 1	DISCOVERER XIII	US	10 AUG 60	14 NOV 60
1960 THETA 1	CAPSULE	US	10 AUG 60	11 AUG 60**
1960 KAPPA 1	DISCOVERER XIV	US	18 AUG 60	16 SEP 60
1960 KAPPA 1	CAPSULE	US	18 AUG 60	19 AUG 60**
1960 LAMBDA 1	SPUTNIK V	USSR	19 AUG 60	20 AUG 60*
1960 LAMBDA 2	ROCKET BODY	USSR	19 AUG 60	23 SEP 60
1960 MU 1	DISCOVERER XV	US	13 SEP 60	18 OCT 60
1960 MU 1	CAPSULE	US	13 SEP 60	15 SEP 60***

DECAYED OBJECTS (CONT'D)

<u>OBJECT</u>	<u>CODE NAME</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>DECAY</u>
1960 OMICRON 1	DISCOVERER XVII	US	12 NOV 60	29 DEC 60
1960 OMICRON 1	CAPSULE	US	12 NOV 60	14 NOV 60**
1960 RHO 1	SPUTNIK VI	USSR	1 DEC 60	2 DEC 60
1960 RHO 2	ROCKET BODY	USSR	1 DEC 60	2 DEC 60
1960 SIGMA 1	CAPSULE	US	7 DEC 60	10 DEC 60**
1960 SIGMA 1	DISCOVERER XVIII	US	7 DEC 60	2 APR 61
1960 TAU 1	DISCOVERER XIX	US	20 DEC 60	23 JAN 61
1961 BETA 1	SPUTNIK VII	USSR	4 FEB 61	26 FEB 61
1961 BETA 2	ROCKET BODY	USSR	4 FEB 61	12-13 FEB 61
1961 BETA 3	NONE	USSR	4 FEB 61	17 MAR 61
1961 GAMMA 2	ROCKET BODY	USSR	12 FEB 61	18 FEB 61
1961 GAMMA 3	SPUTNIK VIII	USSR	12 FEB 61	25 FEB 61
1961 GAMMA 4	NONE	USSR	12 FEB 61	13-18 FEB 61
1961 EPSILON 2	NONE	US	17 FEB 61	30 MAR-2 APR 61
1961 EPSILON 3	NONE	US	17 FEB 61	20 APR 61
1961 EPSILON 4	NONE	US	17 FEB 61	31 OCT 61
1961 ETA 1	TRANSIT 3B & LOFTI	US	22 FEB 61	30 MAR 61
1961 THETA 1	SPUTNIK IX	USSR	9 MAR 61	9 MAR 61*
1961 THETA 2	NONE	USSR	9 MAR 61	10 MAR 61
1961 THETA 3	NONE	USSR	9 MAR 61	10 MAR 61
1961 IOTA 1	SPUTNIK X	USSR	25 MAR 61	25 MAR 61*
1961 IOTA 2	ROCKET BODY	USSR	25 MAR 61	26 MAR 61
1961 IOTA 3	NONE	USSR	25 MAR 61	26 MAR 61
1961 LAMBDA 3	NONE	US	3 APR 61	10 SEP 61
1961 MU 1	VOSTOK	USSR	12 APR 61	12 APR 61****
1961 MU 2	ROCKET BODY	USSR	12 APR 61	16 APR 61
1961 XI 1	CAPSULE	US	16 JUN 61	18 JUN 61**
1961 XI 1	DISCOVERER XXV	US	16 JUN 61	12 JUL 61
1961 OMICRON 46	METAL OBJECT	US	29 JUN 61	29 JAN 62
1961 PI 1	DISCOVERER XXVI	US	7 JUL 61	5 DEC 61
1961 PI 1	CAPSULE	US	8 JUL 61	9 JUL 61**
1961 SIGMA 2	METAL OBJECT	US	12 JUL 61	24 JUL 61
1961 TAU 1	VOSTOK II	USSR	6 AUG 61	7 AUG 61****
1961 TAU 2	ROCKET BODY	USSR	6 AUG 61	9 AUG 61
1961 PHI 1	RANGER 1	US	23 AUG 61	30 AUG 61
1961 PHI 2	ROCKET BODY	US	23 AUG 61	3 SEP 61
1961 CHI 1	EXPLORER XIII	US	25 AUG 61	28 AUG 61

DECAYED OBJECTS (CONT'D)

<u>OBJECT</u>	<u>CODE NAME</u>	<u>SOURCE</u>	<u>LAUNCH</u>	<u>DECAY</u>
1961 PSI 1	DISCOVERER XXIX	US	30 AUG 61	10 SEP 61
1961 PSI 1	CAPSULE	US	30 AUG 61	4 SEP 61**
1961 OMEGA 1	DISCOVERER XXX	US	12 SEP 61	11 DEC 61
1961 OMEGA 1	CAPSULE	US	12 SEP 61	15 SEP 61**
1961 OMEGA 2	METAL OBJECT	US	12 SEP 61	18 SEP 61
1961 OMEGA 3	METAL OBJECT	US	12 SEP 61	28 SEP 61
1961 ALPHA ALPHA 1	MA-4	US	13 SEP 61	13 SEP 61**
1961 ALPHA ALPHA 2	ROCKET BODY	US	13 SEP 61	13 SEP 61
1961 ALPHA BETA 1	DISCOVERER XXXI	US	17 SEP 61	26 OCT 61
1961 ALPHA GAMMA 1	DISCOVERER XXXII	US	13 OCT 61	13 NOV 61
1961 ALPHA GAMMA 1	CAPSULE	US	13 OCT 61	14 OCT 61**
1961 ALPHA GAMMA 2	METAL OBJECT	US	13 OCT 61	25 OCT 61
1961 ALPHA GAMMA 3	METAL OBJECT	US	13 OCT 61	16 OCT 61
1961 ALPHA DELTA 2	NOSE FAIRING	US	21 OCT 61	5 DEC 61
1961 ALPHA EPSILON 2	METAL OBJECT	US	5 NOV 61	30 NOV 61
1961 ALPHA EPSILON 3	METAL OBJECT	US	5 NOV 61	9 DEC 61
1961 ALPHA EPSILON 4	METAL OBJECT	US	5 NOV 61	10 DEC 61
1961 ALPHA EPSILON 5	METAL OBJECT	US	5 NOV 61	12 DEC 61
1961 ALPHA ZETA 1	DISCOVERER XXXV	US	15 NOV 61	3 DEC 61
1961 ALPHA ZETA 1	CAPSULE	US	15 NOV 61	16 NOV 61**
1961 ALPHA ZETA 2	METAL OBJECT	US	15 NOV 61	23 NOV 61
1961 ALPHA THETA 1	RANGER 2	US	18 NOV 61	20 NOV 61
1961 ALPHA IOTA 1	MA-5	US	29 NOV 61	29 NOV 61**
1961 ALPHA IOTA 2	ROCKET BODY	US	29 NOV 61	30 NOV 61
1961 ALPHA KAPPA 1	CAPSULE	US	12 DEC 61	16 DEC 61**
1961 ALPHA KAPPA 2	OSCAR	US	12 DEC 61	31 JAN 62
1961 ALPHA KAPPA 3	METAL OBJECT	US	12 DEC 61	20 DEC 61
1962 GAMMA 1	FRIENDSHIP-7	US	20 FEB 62	20 FEB 62*****
1962 GAMMA 2	ROCKET BODY	US	20 FEB 62	21 FEB 62

* USSR ANNOUNCED SUCCESSFUL RE-ENTRY AND RECOVERY

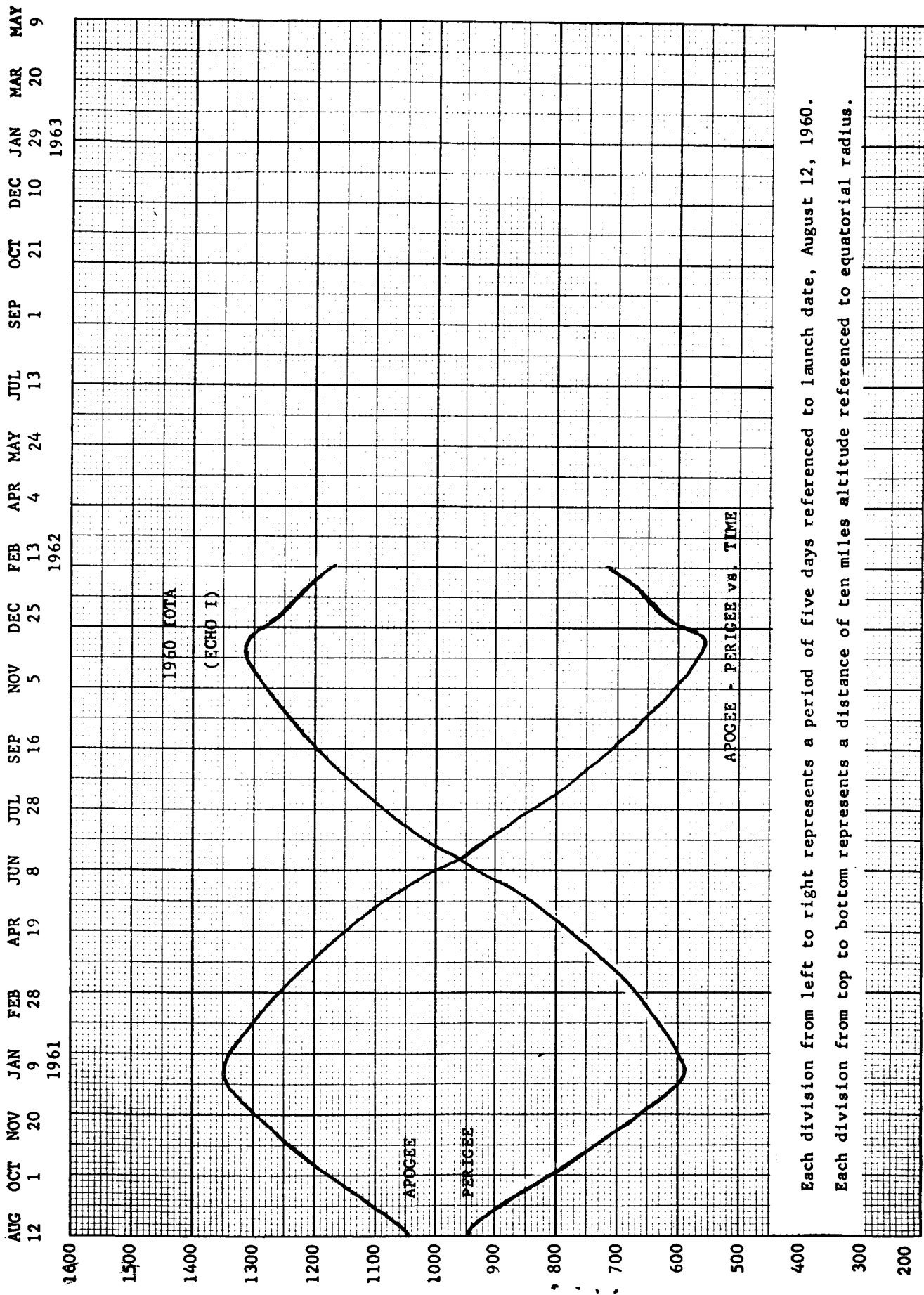
** SUCCESSFUL RE-ENTRY AND RECOVERY

*** SUCCESSFUL RE-ENTRY, BUT NOT RECOVERY

**** USSR ANNOUNCED SUCCESSFUL RE-ENTRY AND RECOVERY OF A MANNED SPACE VEHICLE

***** HIT MOON

***** US SUCCESSFULLY ORBITED AND RECOVERED A MANNED SPACE VEHICLE



Each division from left to right represents a period of five days referenced to launch date, August 12, 1960.

Each division from top to bottom represents a distance of ten miles altitude referenced to equatorial radius.